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ENVIRONMENTAL REMEDIATION LIABILITIES: AN ACCOUNTANT'S PERSPECTIVE

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I. INTRODUCTION

It is almost impossible to pick up a newspaper or magazine today without seeing an article on an environmental issue.¹ Often the articles focus on preventing environmental contamination, reducing waste or conserving natural resources. The articles also address problems related to toxic substances generated decades ago that are just now being identified as urgent, costly problems. The following figures illustrate the magnitude of these problems. First, the Environmental Protection Agency ("EPA") has identified 27,000-30,000 potential Superfund² sites, 1,200 of which are on the National Priority List ("NPL"),³ 20,000 sites are under review, and 8,000 do not warrant further action.⁴ Fewer than 50 sites, however,

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1. Yet to be determined

2. Superfund was created by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), §§ 101-308, 42 U.S.C. §§ 9601-9675 (1988 & Supp. IV 1992). Superfund was established to finance government cleanup of contaminated sites. CERCLA § 104(a)(1), 42 U.S.C. § 9604(a)(1).

3. EPA uses the National Priority List to rank contaminated sites in order of their potential risk. CERCLA § 105(a)(8)(A)-(B), 42 U.S.C. § 9605(a)(8)(A)-(B).

4. C. C. Kelly & L. B. Benedict, *Superfund: What Every Manager Should Know*, PUBLIC MANAGEMENT (August 1990).

have been remediated since Superfund was enacted in 1980.⁵ Second, the costs of remediating these sites will be enmormous. One estimate projects the cleanup cost of each site listed on the NPL to be \$25 million.⁶ If extrapolated against the 1,200 sites on the NPL, the total cleanup cost for past contamination at only the NPL cites could reach \$30 billion. Another estimate puts the total cleanup cost for these 1,200 sites at approximately \$150 billion, or \$125 million per site.⁷ The cost of cleanup becomes staggering when one considers the costs associated with the 20,000 sites still under review. Assuming that half of these 20,000 sites are comparable to the current NPL sites, the additional clean up costs could range from \$250 billion to over \$1 trillion. Yet another source estimates the total Superfund cleanup costs to be as high as \$750 billion.⁸ Remediation of hazardous waste-laden NPL sites is but a singular environmental concern which will require cleanup. Other remediation problems include those unrelated to hazardous waste and those not associated with the NPL.⁹

5. F.R. Miller & V. J. Kiernan, *Some Practical Steps Companies Can Take to Control Superfund Costs*, ENVIRONMENTAL FINANCE (Autumn 1991).

6. Gale Newell et al., *Accounting for Hazardous Waste*, MANAGEMENT ACCOUNTING, (May 1990); GAO, *Hazardous Waste: Limited Progress in Closing and Cleaning Up Contaminated Facilities*, May 1991 (GAO/RCED-91-79).

7. Barnaby J. Feder, *New Battles Over Disclosure*, N.Y. TIMES, June 24, 1990, at A10.

8. A.S. Bouska, *Superfund: A Land Mine in the Insurance Industry*, ENVIRONMENTAL FINANCE (Summer 1991) (citing M. Frinquelli, Testimony before the House Subcommittee on Policy Research and Insurance Relating to Insurer Liability for Cleaning up Hazardous Waste Sites (Sept. 27, 1990)).

9. John H. Cushman Jr., *Administration Plans Revision to Ease Toxic Cleanup Criteria*, N.Y. TIMES, Jan. 30, 1994, at A1 (citing American Enterprise Institute, Office of Technology Assessment).

Category	Number of sites	Estimated cost (in billions)
Federally owned sites	5,000 - 10,000	\$75 - 250
Corrective action on active private sites	2,000 - 5,000	12 - 100
Leaking underground storage (tanks)	350,000 - 400,000	32
State law mandated cleanups	6,000 - 12,000	3 - 120+
Inactive uranium tailing	24	1.3
Abandoned mine lands	22,300	55

Numerous and diverse interests are typically involved in remediating a contaminated site: attorneys, environmental engineers, community representatives, state and federal environmental authorities, local politicians, insurance companies, landowners, business enterprises of all sizes and industries, and consultants from a variety of disciplines. Further, each site likely involves a dozen or more potentially responsible parties ("PRPs") each desparately seeking to avoid liability. Each of these participants in the cleanup process has questions which may seem straightforward, but which nonetheless spark significant controversy.

This article addresses the questions and issues that accountants face to appropriately reflect the impact of environmental remediation liabilities in the financial statements of business enterprises. Given the amount of liability and diversity of interests involved, it is clear that the accountant's task is far from straightforward.

II. BACKGROUND

Before addressing the issues faced when accounting for environmental liabilities, it is necessary to understand an accountant's role in the financial reporting process, as well as the rules applied when developing financial information. As with many other disciplines, there are elements of both art and science in this process.

One of an accountant's many roles in a business enterprise is to assist management in preparing the financial information that will be provided to creditors, investors, employees and other parties interested in understanding the organization's financial re-

sources.¹⁰ The "science" that the accountant uses is referred to as Generally Accepted Accounting Principles ("GAAP").¹¹ This framework includes published rules as well as practices that have developed over time.¹² In the United States, the private sector primarily sets GAAP, however, the Securities and Exchange Commission ("SEC") imposes additional accounting and reporting requirements on publicly-held companies.

The Financial Accounting Standards Board ("FASB") is the private sector organization currently responsible for setting financial accounting standards.¹³ The FASB does this in the form of Statements of Financial Accounting Standards ("SFAS") and FASB Interpretations ("FIN").¹⁴ The SEC staff of the SEC also issues financial accounting and reporting guidelines, referred to as Staff Accounting Bulletins ("SAB"). The FASB Emerging Issues Task Force ("EITF") is also involved in establishing accounting standards. Its mission is to identify and resolve emerging and problematic accounting issues.¹⁵ Although the EITF's conclusions are not subject to the same due process procedures as SFAS or FINs, they are considered established accounting principles within the GAAP hierarchy¹⁶.

The "art" involved in accounting results from the complexity of transactions and the lack of concrete quantitative data to measure transactions. Estimates are frequently used in developing financial information because either the measurement of the transaction is dependent upon future events and is therefore uncertain or be-

10. DONALD E. KIESO & JERRY J. WEYGANDT, INTERMEDIATE ACCOUNTING 3 (5th ed. 1986).

11. Generally Accepted Accounting Principles ("GAAP") are the standards and procedures that most accountants accept as most useful to accurate financial reporting. *Id.* at 7. They include Financial Accounting Standards Board ("FASB") Standards and Interpretations, Accounting Principles Board ("APB") Opinions and Interpretations, and Committee on Accounting Procedure ("CAP") Research Bulletins. *Id.* at 16. For a more detailed discussion of these rule making bodies and their role in the accounting profession, see *id.* at 7-20.

12. *Id.*

13. The FASB is a seven-member board appointed by the Financial Accounting Foundation ("FAF"). *Id.* at 9.

14. Statements on Financial Accounting Standards ("SFAS") are issued through a "due process"-type procedure, which includes public notice, opportunity for comments and public hearings before a final draft of the SFAS is voted on and finally issued. KIESO & WEYGANT, *supra* note 10, at 10.

15. *Id.*

16. See THE MEANING OF PRESENT FAIRLY IN CONFORMITY WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPLES IN THE INDEPENDENT AUDITOR'S REPORT, Statement on Auditing Standards No. 69, (AM. INST. OF CERTIFIED PUBLIC ACCOUNTANTS 1992).

cause relevant data cannot be accumulated in a timely, cost efficient manner prior to the release of the financial statements.¹⁷ This reality is recognized in the FASB's auditing literature. Estimates are normally based on subjective as well as objective factors and, consequently, judgment is required to estimate the effect of a transaction at the date of the financial statements. The FASB has provided the following regarding management's judgment:

Management's judgment is normally based on its knowledge and experience about past and current events and its assumptions about conditions it expects to exist and courses of action it expects to take [T]he process [for preparing accounting estimates] normally consists of -

- a. Identifying situations for which accounting estimates are required.
- b. Identifying the relevant factors that may affect the accounting estimate.
- c. Accumulating relevant, sufficient, and reliable data on which to base the estimate.
- d. Developing assumptions that represent management's judgment of the most likely circumstances and events with respect to the relevant factors.
- e. Determining the estimated amount based on the assumptions and other relevant factors.
- f. Determining that the accounting estimate is presented in conformity with applicable accounting principles and that disclosure is adequate.¹⁸

Due to the disparity of environmental cleanup cost estimates,¹⁹ accounting for such costs inherently requires reliance on assumptions and the exercise of judgment.

III. QUESTIONS TO BE ASKED

In order to account for a potential cleanup liability, the basic questions that the accountant must address are:

- (1) When should liabilities for environmental remediation be recorded?
- (2) What costs should be recorded for those liabilities?

17. KIESO & WEYGANDT, *supra* note 10, at 553.

18. AUDITING ACCOUNTING ESTIMATES, Statement on Auditing Standards No. 57, para. 2-3, 5 (AM. INST. OF CERTIFIED PUB. ACCOUNTANTS 1980).

19. See *supra* notes 6-9 and accompanying text.

- (3) How should the costs be measured?
- (4) Where in the financial statements should the costs be recorded?
- (5) What disclosures should be included in the notes to the financial statements?

The most difficult questions are typically the first, third and fifth. Accordingly, this Article will explore only these three questions.

A. When should liabilities for environmental remediation be recorded?

The recording of environmental remediation liabilities is controlled by SFAS No. 5, "Accounting for Contingencies." SFAS No. 5 sets forth broad guidelines that require the exercise of judgment in evaluating and accounting for loss contingencies.²⁰ These guidelines are linked to two factors: (1) the likelihood that a future event will confirm that a loss has been incurred as of the reporting date; and (2) the ability to reasonably estimate the amount of the loss.²¹ The likelihood that a loss has been incurred must be assessed as one of the following:

- a. *Probable*. The future event or events are likely to occur.
- b. *Reasonably possible*. The change of the future event or events occurring is more than remote but less than likely.
- c. *Remote*. The chance of the future event or events occurring is slight.²²

To the extent it is probable that a liability has been incurred for the loss contingency *and* the amount of the loss can be reasonably estimated, the estimated loss is accrued in the financial statements through a charge to income and establishment of a liability.²³

20. The term "loss contingency" is defined in Statement of Financial Accounting Standards No. 5, *Accounting for Contingencies*, as follows:

For the purpose of this Statement, a contingency is defined as an existing condition, situation, or set of circumstances involving uncertainty as to possible . . . loss . . . to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur.

ACCOUNTING FOR CONTINGENCIES, Statement of Financial Accounting Standards No. 5, para. 1, (Fin. Accounting Standards Bd. 1975) [hereinafter SFAS No. 5].

21. *See id.* para. 8.

22. *Id.* para. 3.

23. *Id.* para. 8.

To put this in the context of an environmental remediation contingency, once management concludes that it is probable a business enterprise will incur cleanup expenses *and* it has sufficient information to reasonably estimate the amount of the expenses, a charge to income should be recorded. Although SFAS No. 5 does not clarify the terms "probable," "reasonably possible" and "remote," accountants must apply the terms to a variety of contingencies, including: (1) pending or threatened litigation; (2) actual or possible claims; and (3) obligations related to product warranties and defects.²⁴ Management and accountants frequently rely on the opinions of specialists, such as attorneys, to reach a conclusion on the likelihood of a loss.²⁵ In addition, prior experience with analogous situations can provide a framework for assessing whether or not a loss is probable.²⁶

Although such assessments are difficult and often generate significant debate, the more troublesome part of the accrual decision is typically "reasonably estimating the loss." SFAS No. 5 does not define the term "reasonably estimate." Because the process of estimating loss contingencies often involves ranges of amounts, accountants historically had difficulty applying the concept of reasonable estimation to amounts in a range.²⁷ In response to this difficulty, the FASB issued FIN No. 14, "Reasonable Estimation of the Amount of a Loss."²⁸ FIN No. 14 advises that when the reasonable estimate of the loss is a range and the likelihood of the loss is deemed probable, then the SFAS No. 5 test for recording a loss is met and the loss should be recorded. To determine the accrual amount, i.e., amount of loss to record, management must first determine currently whether some amount within the range appears to be a better estimate than any other amount in the range.²⁹ If so, the better estimate is accrued.³⁰ If there is no better estimate, man-

24. KIESO & WEYGANDT, *supra* note 10, at 553-55.

25. *Id.*

26. *Id.* at 555.

27. *Id.* at 556.

28. For purposes of this article the term "accrue" or "accrual" simply refers to recording the liability or other effects of the transaction or condition. The process is referred to as an accrual because it encompassed both the charge to income and the reduction of net assets of an entity. Further, the liability is more accurately referred to as an accrued liability because the amount will not have to be paid out until some later date.

29. REASONABLE ESTIMATION OF THE AMOUNT OF A LOSS, FASB Interpretation No. 14, para. 3 (Fin. Accounting Standards Bd. Sept. 1976) [hereinafter FIN No. 14].

30. *Id.*

agement must accrue the minimum amount of the range.³¹ Although the FASB recognized that the minimum amount in the range is not necessarily the amount that will ultimately be assessed, it concluded that the minimum amount should be accrued because "it is not likely that the ultimate loss will be less than the minimum amount."³² However, as the range estimate may change prior to the materialization of liability, accounts must periodically reassess this accrual problem based on new estimates everytime the financial information is released.

FIN No. 14's framework can be applied to contingent losses for environmental remediation, where the estimate of cleanup costs can result in a range of amounts, particularly in the early stages of the remediation process. For example, when alternative remediation plans are under consideration or different allocation methods are used to assign financial responsibility for cleanup, there typically will be a range of costs. The ability to estimate a range is sufficient to provide management with a basis to record an accrual for a loss that is probable. The SEC Staff, in SAB No. 92, indicated that an accrual for the amount at the low end of the range is necessary even if the upper limit of the range is uncertain.³³

In summary, a liability for environmental cleanup should be recorded in the financial statements when (1) it is probable that a liability has been incurred and (2) the amount of the liability can be reasonably estimated. If it is probable that a loss has been incurred but the reasonable estimate is a range of amounts, the accountant should record the better estimate within the range. When no amount in the range is a better estimate than any other amount, however, the minimum amount of the range should be recorded. The accrual of a loss should not be delayed until only a single amount can be reasonably estimated.³⁴

B. How should the costs be measured?

Measuring costs involved in a cleanup can be as difficult as determining *when* to record a liability. There is no specific accounting principle that addresses this question. Rather, various authoritative documents and general practice provide guidance. The specific issues that answer the question "*how* to measure costs" include:

31. *Id.*

32. *Id.* at n.1.

33. Accounting and Disclosures Relating to Loss Contingencies, 58 Fed. Reg. 32,843 (1973) [hereinafter SAB No. 92].

34. FIN No. 14, *supra* note 28, para. 2.

- (1) Should costs be measured at gross or discounted amounts?
- (2) Should costs be estimated based on current or future remediation laws and technologies?
- (3) Should the liability consider recoveries of costs of third parties?
- (4) What happens when estimates of costs are revised?

The first issue is whether cleanup costs should be accrued at their gross amounts or on a discounted basis. The process of investigating and remediating a site is a long one.³⁵ One study indicated that the cleanup of certain operational, non-Superfund sites would result in expenditures of \$234 billion over thirty years.³⁶ Land disposal facilities that close are subject to post-closure care and monitoring requirements to ensure the integrity of the facility.³⁷ Because remediation costs, including post-closure care and monitoring, can extend over such long periods, the discounted present value of these costs differs significantly from their gross values.

There is little authoritative accounting guidance covering discounting of cleanup costs, resulting in diversity in practice. In March of 1993, the EITF issued an abstract to provide more definitive guidance and enhance the comparability of financial statements.³⁸ Issue 93-5 permits, but does not require, accountants to discount environmental liabilities if the amount of the aggregate obligation, as well as the timing and the amount of the cash payments, are fixed or reliably determinable.³⁹ For this to be the case, there must be a site-specific plan for the cleanup, and the aggregate amount of the obligation and the amount and timing of the cash payments for the site remediation must be based on objective and verifiable information.⁴⁰

35. Corrective action generally consists of an assessment, a response formulation and execution of a cleanup remedy. *United States v. Rohm & Haas*, 2 F.3d 1265, 1271 (3d Cir. 1993).

36. SECURITIES AND EXCHANGE COMMISSION, SEC TODAY, vol. 92-107 (June 3, 1992) (citing study by University of Tennessee Waste Management Research and Educational Institute).

37. Under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901-6987 (1988 & Supp. IV 1992), a permit is required to generate, treat, store and dispose of hazardous waste at a site. 42 U.S.C. § 6925(a). There are stringent closing procedures that must be followed before a site can be released from a permit. Richard G. Stoll, *The New RCRA Cleanup Regime: Comparisons and Contrasts with CERCLA*, 44 S.W. L.J. 1299, 1303 (1991).

38. ACCOUNTING FOR ENVIRONMENTAL LIABILITIES, EITF Abstracts Issue 93-5 (Emerging Issues Task Force, 1993) [hereinafter EITF Abstract 93-5].

39. *Id.*

40. EITF Abstract 93-5, *supra* note 38.

The undiscounted estimated cash flows represent the estimated amounts expected to be paid on settlement. They include estimates of inflation and are required to be computed "using explicit assumptions and methods derived from the remediation plan, such that a knowledgeable third party could review the computation and concur with the estimated cash flows."⁴¹ Discounting is not appropriate in situations when there is only a range of possible losses and there is no better estimate.⁴² In such situations, the discounting test is not met because the aggregate obligation is not fixed or reliably determinable.

Although the EITF did not establish a particular discount rate, the SEC Staff has concluded that the discount rate should be based on the rate at which the environmental liability could be settled in an arm's-length transaction with a third party.⁴³ This "settlement rate," however, should not exceed the rate that could be earned on essentially risk-free monetary assets with maturities comparable to those of the environmental liability.⁴⁴ Publicly-held companies generally use this "risk-free rate" rather than the settlement rate, because the settlement rate is too theoretical.

A second issue is whether to base cleanup cost estimates on current or future laws and technologies. Given the time frame involved in most remediations, it is likely that remediation regulations and technologies will change before cleanup is complete. According to SAB No. 92, however, the assumptions regarding remedial methods costs should not incorporate these possible changes. SAB No. 92 states that cost estimates should be based on "currently available facts, existing technology, and presently enacted laws and regulations."⁴⁵

The SEC permits companies to consider their own, or other companies' prior remediation experience, as well as information released by EPA and other organizations to determine cleanup costs. These information sources allow businesses to develop reasonable estimates prior to a Record of Decision ("ROD"),⁴⁶ and in some cases, prior to finalizing the Remedial Investigation/Feasibility

41. *Id.*

42. *Id.*

43. SAB No. 92, *supra* note 33, at 32,844.

44. *Id.* at 32,845.

45. *Id.* at 32,844.

46. After a final EIS has been issued, the proper official will prepare a Record of Decision. 40 C.F.R. § 6.511(1993).

Study ("RI/FS").⁴⁷ This view is shared by at least one member of the SEC. In a March 1994 speech, Commissioner Roberts of the SEC stated:

SFAS 5 appears to me to be relatively straightforward. Most parties are able to determine a loss is probable but apparently stumble on the reasonably estimable determination. Since I understand that estimates of a potential environmental liability are usually available, this circumstance does not make much sense to me.⁴⁸

A third issue is whether to offset probable cleanup costs with reasonably possible recoveries from other parties, such as insurance companies or other PRPs. EITF hypothesized an enterprise that determined its probable loss for an environmental contingency at \$10 million. It further assumed that an \$8 million insurance recovery was reasonably possible, but did not reach the probable threshold of SFAS No. 5.⁴⁹ The Task Force concluded that the company should report a \$10 million exposure because: (1) the amount of an environmental liability is evaluated independently from any potential claim for recovery, and (2) the loss to be recorded as a result of the liability should be reduced only when the realization of the recovery is deemed probable.⁵⁰

For a recovery to be "probable" (a higher threshold than "reasonably possible"), there should be minimal uncertainty about the outcome of the claim. Generally, the third party should acknowledge its obligation under the claim and have the financial ability to meet the obligation. Given the litigious posture of most third-party claims, it may be difficult to conclude that recovery of a claim is "probable." In SAB No. 92, the SEC Staff observed that:

Recent reports of litigation over insurance policies' coverage of . . . environmental liabilities and financial failures in the insurance industry indicate that there are significant uncertainties regarding both the timing and the

47. EPA conducts a Remedial Investigation/Feasibility Study ("RI/FS") to identify the source and extent of contamination and remediation possibilities at each site. 40 C.F.R. § 300.68(d) (1986). Based on the study, EPA must select an appropriate cleanup option based on cost, technology, reliability and effects on public health. *Id.* § 300.68(i).

48. Richard Y. Roberts, Commissioner, U.S. Securities and Exchange Commission, *Environmental Liability Disclosure, Staff Accounting Bulletin No. 92, and Shareholder Proposals* (March 6, 1994).

49. EITF Abstracts 93-5, *supra* note 38, paras. 17, 19.

50. *Id.*

ultimate realization of claims made to recover amounts from insurance carriers and other third parties. The risks and uncertainties associated with a registrant's contingent liability are separate and distinct from those associated with its claim for recovery from third parties.⁵¹

The last sentence in the above quotation from the SEC staff alludes to an important, related issue. Specifically, the liability recorded by each PRP should be based on that PRP's best estimate of its allocable share of the aggregate cleanup cost for the site unless it is probable that other PRPs will not fully pay their allocable share. In such cases, the PRP should include in its estimated liability the additional costs it will bear as a result of the failure of other PRPs to contribute to the cleanup. Potential recoveries from these PRPs through litigation should not be anticipated as the realization of such amounts is not deemed probable.⁵² Therefore, although it is appropriate for a company to consider the likely allocation of remediation costs among participating PRPs when determining the amount of liability to be recorded, it is not appropriate to consider the likely recovery of amounts from third parties.⁵³

The difference between estimating a liability based on an assumed allocation of costs, and estimating the amount of cost recovery from a third party is subtle. The allocation process represents an aspect of measurement that is integral to estimating the gross amount of cash that a company is expected to expend, i.e., estimating a company's liability. To the extent that two or more PRPs share the responsibility for remediating a site, the liability of any one party is a direct result of the allocation arrangement. In contrast, the amount of recovery from a third party has no bearing on the estimated amount of gross cash to be expended by a company for cleaning up a site. The ability to recover amounts from third parties affects the net cost of remediation but does not shift or mitigate the liability to remediate.

From an accountant's perspective, future cash receipts from a third party represent an asset, not the reduction of a liability. Consider the following hypothetical: Companies A, B and C are named as PRPs at a site and expect to share remediation costs equally. Consequently, each of the three companies is liable for, and will expend cash for, one-third of total remediation costs. However, C

51. SAB No. 92, *supra* note 33, at 32,844.

52. *Id.*

53. EITF Abstracts 93-5, *supra* note 38.

also expects to recover some or all of its allocated costs from a third party, its insurer. In this situation, C has two different contingencies to evaluate and record: (1) the amount of cash to be expended for its share of the remediation costs (the environmental remediation liability), and (2) the amount of cash to be received as a result of its insurance claim (the claim receivable). Although the amount of the insurance claim is related to the environmental liability, the liability to remediate is separate and distinct from C's ability to recover its costs. Phrased differently, the amount of C's liability is in no way dependent upon the amount C may recover from its insurer. Accordingly, C must evaluate, measure, and record its liability for remediation costs separately from its claim receivable.

Although most discussions of third-party recoveries focus on amounts claimed from insurers, there are many other comparable situations. For example, if one or more PRPs identified by EPA decline to participate in remediation activities ("non-participating PRPs"), those PRPs who share in the cost of the cleanup process ("participating PRPs") have the right to sue the non-participating PRPs to recover their costs and even damages. Similarly, participating PRPs have the right to recover costs from responsible parties not identified by EPA but determined to have contributed hazardous material to a waste site ("unknown PRPs"). Additionally, responsible entities can seek reimbursement of costs from a third-party fund, such as a state fund established to reimburse gasoline station owners for the costs of removing certain underground storage tanks. Recovery from any of these third parties represents contingent receivables that should not be considered in measuring the amount of the remediation liability.

One final observation related to evaluating, measuring and recording third party recoveries is that in most circumstances, estimates of the liability for environmental remediation will be recorded in the financial statements in a period (or periods) prior to estimates of the third-party recovery. The time at which a liability is both probable and measurable typically will precede the time at which a recovery is both probable and measurable. The result is volatility and unpredictability in the income statement because the charge to income to record the liability will be in a period (month, quarter or year) different from the credit to income to record the recovery. Accountants try to alleviate this apparent volatility by adequate disclosure of these items in the footnotes to the financial statements.

Considering all of the assumptions and subjectivity involved in measuring the costs of environmental remediation liabilities, the estimates will necessarily change as new information becomes available. This leads to the fourth and final issue within the question of measuring an environmental remediation liability: when and how changes in estimates are recorded in the financial statements.

The broad question of accounting for changes in estimates is answered in a long-standing authoritative standard, Accounting Principles Board ("APB") Opinion No. 20 entitled "Accounting Changes,"⁵⁴ which states:

Changes in estimates used in accounting are necessary consequences of periodic presentations of financial statements. Preparing financial statements requires estimating the effects of future events. Future events cannot be perceived with certainty; estimating, therefore, requires the exercise of judgment. Thus accounting estimates change as new events occur, as more experience is acquired, or as additional information is obtained.⁵⁵

The receipt of new facts or clarifying information about a particular loss contingency will generally affect management's estimate of its environmental remediation costs. Such additional information could relate to a wide array of factors involved in estimating the costs to be incurred, including: (1) the type and amount of contaminants at the site; (2) the identification, number and financial position of other PRPs; (3) the allocation of costs among PRPs; (4) data regarding the remediation experiences at other sites; (5) results of an RI/FS; (6) receipt of a ROD; (7) refinements to the remediation plan to be followed in cleaning up the site; (8) the type of technology available to remediate; (9) unanticipated problems or toxic substances identified in performing the remediation; (10) the type and duration of post-clean up monitoring required; (11) unanticipated problems encountered in the post-clean up monitoring period; (12) new regulations regarding the appropriate method for disposing of hazardous waste; (13) new laws regarding the acceptable levels of contaminants; and (14) changes in

54. The Accounting Principles Board was the predecessor organization to the FASB. KIESO & WEYGANDT, *supra* note 10, at 9. The APB issued a total of 31 standards, some of which have been superseded by pronouncements of the FASB. APB No. 20 was issued in 1971. Although it has been amended, its original requirements have remained essentially unchanged. See 2 FASB ORIGINAL PRONOUNCEMENTS, 83-328 (June 1, 1992).

55. ACCOUNTING PRINCIPLES BOARD, ACCOUNTING CHANGES, OPINION No. 20, para. 10 (July 1971) [hereinafter APB No. 20].

the appropriate discount rate. The effect that new information has on the estimated liability is recorded in the financial statements "in the period of change if the change affects that period only or [in] the period of change and future periods if the change affects both."⁵⁶ The restatement of previous periods' financial statements is not permitted.

A change in estimate is distinct from a change in accounting principle and from the correction of an error. For example, a company may have an accounting policy of recording all environmental remediation liabilities at their gross amounts, even when the criteria for discounting are met. If the company subsequently decides to change its policy such that eligible liabilities are discounted, that change is treated as a change in accounting principle.⁵⁷ Within the accounting framework, errors represent mathematical mistakes, mistakes in the application of accounting principles, or the oversight or misuse of available information.⁵⁸ A subsequently discovered error in the financial statements is corrected and reported as a prior period adjustment.⁵⁹

In summary, a liability for environmental remediation should be measured based on existing laws and technologies and should consider prior experience in remediating sites. Measurement of the liability should incorporate reasonable assumptions about the allocation of costs among potentially responsible parties but should not factor in recoveries from third parties. Amounts should generally be recorded at their gross amounts, although discounting is permitted if certain criteria are met. If the measurement process results in a range of potential costs and no better estimate exists, then the minimum should be recorded. As further information is obtained and estimates are refined, the effect of any change in the estimated liability should be recorded as a charge or credit to income in the period when the change becomes known.

56. *Id.* para. 31.

57. The effect of this type of change in accounting principle is reported by including the cumulative effect of the change in principle in the net income of the period of change. The cumulative effect is based on a retroactive computation. For further discussion of Accounting Changes, see APB No. 20, *supra* note 55, paras. 18-30.

58. APB No. 20, *supra* note 55, para. 13.

59. See generally, REPORTING THE RESULTS OF OPERATIONS, Opinion No. 9 (Accounting Principles Bd. December 1966) (governing financial statement presentation of prior period adjustments).

C. What disclosures should be included in the notes to the financial statements?

The notes to financial statements provide to the reader or user, a broad understanding of the accounting concepts and assumptions used to develop the amounts presented in the balance sheet, income statement and statement of cash flows. They also explain the components of captions that appear in the financial statements. Because of the nature and extent of the information in the notes, it has long been held that the notes are an integral part of financial statements prepared in accordance with generally accepted accounting principles.⁶⁰ For this reason, both GAAP and the SEC require certain information to be disclosed in the notes or supplemental schedules to the financial statements. Much of the qualitative discussion required by the SEC, however, is presented outside the financial statements entirely, within sections that are titled "Management's Discussion and Analysis" ("MD&A"), "Legal Proceedings," or "Description of Business." The GAAP requirements apply to all business entities, publicly held and privately owned, that prepare financial statements in accordance with GAAP. The SEC requirements apply to all publicly held companies. This article outlines the GAAP and SEC required disclosures in the notes to the financial statements, although brief mention will be made of the separate information required by the SEC.

The GAAP requirements that apply to environmental remediation contingencies are as follows:⁶¹

- If a liability is recorded, it may be necessary to disclose the nature of the liability and, in some circumstances, the amount accrued in order for the financial statements not to be misleading.⁶²
- If a liability is not recorded because the likelihood of the loss is merely "reasonably possible" (rather than "probable") but an amount or range of loss can be reasonably estimated, the nature of the contingency and an estimate of the possible loss or range of loss should be disclosed.⁶³

60. RECOGNITION AND MEASUREMENT IN FINANCIAL STATEMENTS OF BUSINESS ENTERPRISES, Statement of Concepts No. 5, para. 7a (Fin. Accounting Standards Bd. 1975).

61. As with all authoritative accounting literature, these requirements need not be applied to immaterial items.

62. SFAS No. 5, *supra* note 20, para. 9.

63. *Id.* para. 10.

- If a liability is not recorded because an amount or range of loss cannot be reasonably estimated, but the likelihood of the loss is probable or reasonably possible, the nature of the contingency should be disclosed and it should be stated that an estimate of the amount of loss cannot be made.⁶⁴
- If a liability is recorded but there is at least a reasonable possibility that an additional loss may have been incurred, the nature of the contingency and an estimate of the possible additional loss or range of additional loss should be disclosed.⁶⁵ This circumstance often arises when the reasonable estimate of the loss is a range and the minimum amount of the range is recorded as the liability because there is no better estimate of the loss.⁶⁶
- If some or all of an environmental remediation liability is discounted, the undiscounted amount of the liability and the discount rate used should be disclosed.⁶⁷
- If a potential recovery from a third party is not recorded because it is not deemed probable of realization, disclosure of this gain contingency should be made in a manner that would not mislead the reader as to the likelihood of realization.⁶⁸ The disclosure should include a discussion of the nature of the recovery, amount or range of amounts (if reasonably estimable) and other relevant facts, including the type of third party involved and the current status of the claim.⁶⁹
- If a potential recovery from a third party is recorded, disclosure of the nature of the recovery and the amount recorded should be disclosed. Other relevant information may also be required to be disclosed to make the financial statements not materially misleading.⁷⁰ The is-

64. *Id.*

65. *Id.*

66. *See, e.g.,* REASONABLE ESTIMATION OF THE AMOUNT OF A LOSS, Interpretation No. 14, paras. 3-7 (Fin. Accounting Standards Bd. Sept. 1976).

67. EITF Abstracts 93-5, *supra* note 38. The SEC requires additional disclosures for liabilities that are discounted; *see* SAB No. 92, *supra* note 33, at 32,844.

68. SFAS No. 5, *supra* note 20, para. 17b.

69. Although SFAS No. 5 does not specifically identify the components of a disclosure for a gain contingency, an analogy can be drawn to the disclosure requirements for loss contingencies contained in SFAS No. 5.

70. SFAS No. 5 has no specific disclosure requirements for a recorded gain contingency for the reason that such items "usually are not reflected in the accounts." *See supra* note 20, SFAS No. 5, para. 17a. EITF Abstract, Issue 93-5, *supra* note 38, permits recording a claim for recovery that is probable of realization but

suer of the financial statements should consider disclosing the type of third party involved, the classification of the asset in the balance sheet, the classification of the gain in the income statement, the expected timing of the receipt of cash, and the basis upon which the recovery was deemed probable of realization.

- A company's accounting policies or methods should be disclosed, particularly when there is an acceptable alternative accounting principle available.⁷¹ Within the context of environmental remediation liabilities, companies are permitted, but not required, to discount those liabilities that meet certain criteria, as discussed above. This choice to present the liability as either a discounted or gross amount represents a choice between acceptable alternative accounting policies and should be disclosed.

The SEC required disclosures are:

- If the measurement of the liability for environmental remediation costs is based on an assumed apportionment of costs among PRPs and the information underlying the assumption gives rise to uncertainty regarding the company's ultimate obligation, disclosure of the uncertainty may be necessary. For example, if the assumed apportionment allocates costs to possibly insolvent parties or to parties that dispute their responsibility, then the company's ultimate obligation could be in excess of the amount accrued. An additional loss that is reasonably possible because of this uncertainty should be included in the notes to the financial statements.⁷²
- If some or all of an environmental remediation liability is discounted, the SEC requires that: (a) expected cash payments for each of the five succeeding years and the aggregate amount thereafter be disclosed; (b) the expected aggregate undiscounted amount be reconciled to the amount accrued in the financial statements; and (c) material changes in the expected aggregate amount

does not address the issue of disclosure. Although the literature does not specifically identify the disclosure requirements for a recorded gain contingency, an analogy can be drawn to the disclosure requirements for loss contingencies contained in SFAS No. 5.

71. DISCLOSURE OF ACCOUNTING POLICIES, APB Opinion No. 22, para. 12 (Accounting Principles Bd. April 1972).

72. SAB No. 92, *supra* note 33, at 32,844.

(other than changes resulting from payments) since the last balance sheet date be explained.⁷³

- In applying the requirements of SFAS No. 5, consideration should be given to discussing the judgments and assumptions underlying the recognition and measurement of environmental loss contingencies. Information to be disclosed could include (a) circumstances affecting the reliability and accuracy of estimated amounts, (b) whether unasserted claims may affect the amount of the contingency, (c) cost-sharing arrangements with other parties, (d) possible recoveries from third parties, such as insurers, or under indemnification arrangements, (e) the timeframe in which payments for accrued and unrecognized amounts are expected to be made, and (f) significant components (e.g. engineering fees, remediation activities, legal fees, monitoring costs) of the liability.⁷⁴
- Liabilities for site restoration, post-closure and monitoring commitments, and other environmental related exit costs that could arise upon the sale, disposal or abandonment of property should be disclosed. Information generally includes the nature of the costs, estimated total cost, costs accrued to date, classification of the accrued costs in the balance sheet, and the amount (or range of amounts) of additional costs that are reasonably possible.⁷⁵
- If an asset is held for sale or development and it is likely that, prior to development or sale, the company will expend amounts to remediate the site, disclosure should be made regarding the manner in which these expenditures were considered in assessing the asset's net realizable value.⁷⁶
- If the company may be obligated to remediate (or reimburse costs incurred to remediate) environmental damage related to assets or businesses previously sold or shut down, disclosure should be made of estimated costs that are at least reasonably possible.⁷⁷

73. *Id.*

74. *Id.* at 32,845.

75. *Id.* at 32,846.

76. SAB No. 92, *supra* note 33, at 32,846.

77. *Id.*

The SEC requires disclosure of other environmental matters that relate to the company's operations, legal proceedings, capital requirements, liquidity, and compliance with regulations. These disclosures are not limited to environmental remediation matters and are intended to assist the reader or investor to understand the business, operations and risks of the company. As indicated earlier, such disclosures are presented outside the financial statements⁷⁸ and, therefore, implicate management issues and not exclusively accounting issues.

In summary, both GAAP's and the SEC's disclosure requirements are extensive and their application to specific circumstances require a comprehensive understanding of the facts as well as the exercise of professional judgment. Considering the complexities involved in the environmental remediation process, it is unlikely that an accountant will be able to develop adequate disclosures without the assistance and input of knowledgeable environmental, legal and operating personnel.

D. Conclusion

Recently, I attended a conference on environmental remediation liabilities, responsibilities, regulations and pending changes in the law, and met an environmental consultant who asked why an accountant would need an understanding of these topics. My response to this question should now be clear. Accountants cannot effectively or appropriately apply their skills and judgment to the financial questions related to environmental remediation contingencies without a basic understanding of the issues, regulations, and terminology that environmental professionals employ in executing their responsibilities. Similarly, it may be helpful for environmental professionals to understand the framework accountants operate within so that the communication process among the various parties can be more efficient.

⁷⁸ For further discussion of the specific SEC requirements, see Items 101 (Description of Business), 103 (Legal Proceedings) and 303 (Management's Discussion and Analysis) of Regulation S-K, and SAB No. 92, *supra* note 33, at 32, 845.